

**Remarks/Arguments:**

Claims 1-14 were pending at the time of the Office Action. Claims 6-14 are canceled herewith. Claim 1 is amended herewith, for which support may be found on page 2 lines 13-19 and on page 8 lines 6-18 of the application, as well as in canceled Claim 6.

***Claim Rejections - 35 USC § 102***

Claims 1-3, 5 and 6 are rejected under 35 USC § 102(b) as being anticipated by *Fuchs* USPN 5,618,430. Applicant respectfully submits that Claim 1 and its dependents contain a combination of features not taught by *Fuchs*, and is therefore not anticipated for at least the following reasons.

In Claim 1, the polluted air firstly passes through a conditioning chamber where it is moistened. By conditioning the polluted air in a separate conditioning chamber, i.e. separate from the chamber in which the purification of the air by means of decomposition using micro-organisms takes place, significant advantages arise. First, the moisture level of the air can be accurately controlled to ensure that it has a sufficiently high moisture content for efficient biofiltration in the air purification chamber. Also, it keeps the air sufficiently moistened so as to assist in maintaining the near anaerobic condition in the fluidized bed in the purification chamber, and keeps the particulate media in the air purification chamber moist at all times. It further helps keep the polluted air at a desired temperature. These aspects are detailed on page 2, lines 13-19 and page 8, lines 6-18. Thereafter, the properly conditioned air passes into the separate air purification chamber where the biofiltration by means of the fluidized bed of micro-organism-containing particulate media with simultaneous stirring takes place. The advantages of this combined air purification are discussed in detail in the specification, e.g. on page 10 line 1 to page 12 line 8.

It is respectfully submitted that *Fuchs* does not teach or even remotely suggest conditioning a polluted gas in a separate conditioning chamber as a preliminary step prior to passing the air into a separate air purification chamber for biofiltration by means of a fluidized bed of micro-organism-containing media with simultaneous stirring.

The Office Action states that column 3, lines 47-49 of *Fuchs* indicates that waste gas can be treated by passing it through a fluidized bed of the reaction particles. Applicant does not contest this, but respectfully disagrees with the assertion that this passage teaches gas treatment using a fluidized bed of micro-organism-containing particulate media with simultaneous stirring. Rather, stirring of the bed is associated only with the treatment of waste

water, not a waste gas. This is made clear by Figure 1 and its description commencing at column 5, line 14. Similarly, the cited passage at column 3, lines 53-56 refers to waste water treatment rather than waste gas treatment, and it is clear that the reference to "fluidized bed" in the context of waste water treatment refers to a simple suspension (see column 3, lines 48-50) of particles in water. It does not refer strictly to a "fluidized bed". Similarly, the passage at column 5, line 6 to column 6, line 2 cited in the Office Action clearly deals with waste water treatment only, not with waste gas treatment.

The Examiner will appreciate that *Fuchs* deals primarily with biological treatment of waste water, e.g. in the specific examples thereof with reference to Figure 1, and only deals very peripherally or secondarily with biological treatment of waste gases.

In those cases where the *Fuchs* process is used for biological waste gas treatment, *Fuchs* does not disclose moistening the polluted air before passing it through the fluidized bed as recited in Applicants' Claim 1. *Fuchs* at column 4, lines 6-12 is asserted at point 12 in the Office Action to teach such a step, but this is in error. *Fuchs* merely mentions that the waste gas can first be subjected to scrubbing, but it is the wash water laden with the materials contained in the waste gas, i.e. the scrubbing water, that is treated in the reactor. The scrubbed gas stream does not enter the reactor; only the aqueous stream does. Indeed, nowhere does *Fuchs* teach or suggest conditioning contaminated air in a separate conditioning chamber before passing it into an air purification chamber as claimed. Thus, not all of the claim features are taught. Applicant therefore respectfully requests withdrawal of the rejection.

In the interest of maintaining an accurate record, Applicant also notes that *Fuchs* at column 3, lines 59-60 does not mention purified air emerging from a fluidized bed as indicated in the Office Action under point 8. Applicant also respectfully disagrees with the assertion under point 11 of the Office Action that *Fuchs* at column 4, lines 6-12 inherently teaches anaerobic conditions. *Fuchs* sometimes operates his process under aerobic rather than anaerobic conditions, as seen at column 3, lines 62-65, and *Fuchs* at column 4, lines 6-12 does not indicate that anaerobic conditions are used.

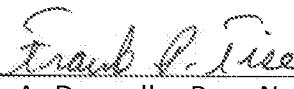
#### ***Claim Rejections - 35 USC § 103***

Claims 4 and 5 are rejected under 35 USC § 102(b) as being unpatentable over *Fuchs* USPN 5,618,430. Because *Fuchs* does not teach all of the features of Claim 1, *Fuchs* does not render obvious dependent Claims 4 and 5. Additionally, with respect to Claim 5, the Office Action asserts at point 17 that it would have been obvious to modify the *Fuchs* process to purify

a gas by running the reactor under anaerobic or near-anaerobic conditions. But this conclusion is based on an unsupported premise, namely that it was known in the art (*Fuchs*, column 3, lines 61-62) that pollutants can be removed from gases under such conditions. The cited passage indicates that such conditions were known to be suitable for treating waste water, not gases. Applicant can find no teaching in *Fuchs* regarding gas purification under anaerobic conditions, and so *Fuchs* is deficient as a reference against Claim 5 for the additional and separate reason of not teaching this feature. Applicant therefore respectfully requests withdrawal of the rejection.

For at least the reasons noted above, Applicant submits that the application is in condition for allowance and respectfully requests reconsideration and favorable action. Applicant invites the Examiner to contact Frank Tise, undersigned, if it appears that this may expedite examination.

Respectfully submitted,

  
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FPT/gdb

Attachments: EOT (2 mo)

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